

t35_matrix_9

(TMdWbSEvhAHrvyfa1JkgozbH9mSCdrY4PYq)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $np_2 : \iota$ be given. Let $np_1 : \iota$ be given. Let $v4_matrix_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((v1_relat_1\ X1) \wedge ((\\ v1_funct_1\ X1) \wedge ((v3_card_1\ X1\ X0) \wedge (v1_finseq_1\ X1)))) \Rightarrow (k4_finseq_1 \\ X1 = k2_finseq_1\ X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((v1_relat_1\ X3) \wedge \\ ((v1_funct_1\ X3) \wedge (v1_finseq_1\ X3))) \Rightarrow ((X3 = k11_finseq_1\ X0\ X1 \\ X2) \Leftrightarrow ((k3_finseq_1\ X3 = np_3) \wedge ((k1_funct_1\ X3\ np_1 = X0) \wedge ((k1_funct_1 \\ X3\ np_2 = X1) \wedge (k1_funct_1\ X3\ np_3 = X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_3) \wedge (m2_subset_1\ np_3\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_3\ k5_numbers) \wedge (m1_subset_1\ np_3\ k1_numbers)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_2) \wedge (m2_subset_1\ np_2\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_2\ k5_numbers) \wedge (m1_subset_1\ np_2\ k1_numbers)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow \\ & (k4_finseq_1 \ X0 = k9_xtuple_0 \ X0) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 \ X0) \wedge \\ & ((m1_subset_1 \ X1 \ X0) \wedge ((m1_subset_1 \ X2 \ X0) \wedge (m1_subset_1 \ X3 \ X0)))) \Rightarrow \\ & (k3_finseq_4 \ X0 \ X1 \ X2 \ X3 = k11_finseq_1 \ X1 \ X2 \ X3) \end{aligned} \quad (8)$$

Assume the following.

$$np_3 \in k2_finseq_1 \ np_3 \quad (9)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. v3_card_1 \ (k11_finseq_1 \ X0 \ X1 \\ & \quad X2) \ np_3 \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. v1_finseq_1 \ (k11_finseq_1 \ X0 \\ & \quad X1 \ X2) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7_ordinal1 \ X0) \Rightarrow (\forall X1. ((v1_funct_1 \ X1) \wedge ((\\ & \quad v1_funct_2 \ X1 \ (k2_finseq_1 \ X0) \ (k2_finseq_1 \ X0)) \wedge ((v3_funct_2 \\ & \quad X1 \ (k2_finseq_1 \ X0) \ (k2_finseq_1 \ X0)) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \\ & \quad (k2_zfmisc_1 \ (k2_finseq_1 \ X0) \ (k2_finseq_1 \ X0)))))) \Rightarrow ((v4_matrix_2 \\ & \quad X1 \ X0) \Leftrightarrow (\exists X2. (v7_ordinal1 \ X2) \wedge (\exists X3. (v7_ordinal1 \\ & \quad X3) \wedge ((X2 \in k9_xtuple_0 \ X1) \wedge ((X3 \in k9_xtuple_0 \ X1) \wedge ((X2 \neq X3) \wedge ((\\ & \quad k1_funct_1 \ X1 \ X2 = X3) \wedge ((k1_funct_1 \ X1 \ X3 = X2) \wedge (\forall X4. (v7_ordinal1 \\ & \quad X4) \Rightarrow ((X4 \in k9_xtuple_0 \ X1) \Rightarrow ((X4 = X2) \vee ((X4 = X3) \vee (k1_funct_1 \ X1 \\ & \quad X4 = X4)))))))))))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0)\wedge((v1_funct_2 X0 (k2_finseq_1 np_3) \\ & (k2_finseq_1 np_3))\wedge((v3_funct_2 X0 (k2_finseq_1 np_3) (k2_finseq_1 \\ & np_3))\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 (k2_finseq_1 \\ & np_3) (k2_finseq_1 np_3))))))\Rightarrow(\neg(X0 = k3_finseq_4 k5_numbers \\ & np_2 np_3 np_1)\wedge(v4_matrix_2 X0 np_3)) \end{aligned}$$